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ABSTRACT

How paraprofessionals in vocational education programs for the disadvantaged and handicapped are being selected, trained, paid, and utilized is the major focus of the study presented in this document. The need for paraprofessional help and the use of the paraprofessional's time in serving handicapped students is discussed first. Then the barriers which prohibit or limit the use of paraprofessionals are presented. Examples of inservice education programs for paraprofessionals in vocational education settings for handicapped and disadvantaged students are included. A discussion of the factors adding impetus to the increased use of paraprofessionals precedes the author's conclusions. Two major conclusions are stated: The paraprofessional is becoming an important member of the teaching staff and will be employed in even greater numbers in the years ahead; and both professionals and paraprofessionals must learn to work together. Finally, based on the finding that training for mainstreaming has been inadequate, the author outlines six features to be included in a new inservice training model designed on a team learning concept. Seven summary statements of the research findings conclude the report. (BM)

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THE PARAPROFESSIONAL IN VOCATIONAL EDUCATION PROGRAMS FOR DISADVANTAGED AND HANDICAPPED STUDENTS

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By

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CE 012 521

THE PARAPROFESSIONAL
IN VOCATIONAL EDUCATION PROGRAMS
FOR DISADVANTAGED AND HANDICAPPED STUDENTS

Could you use additional help in your classroom? If this question was posed to any group of teachers, at any time and in any school setting, the response would be a resounding and almost unanimous "YES!"

The same response would have been made 100 years ago when most schools consisted of one classroom and the teacher tried to teach all elementary grade levels. The demands were great and in many cases were set down explicitly by state or local school officials. For example, the rules for public school teachers published in New York in 1872, included these daily chores:

> **Teachers each day will fill lamps and clean chimneys.**
>
> **Each teacher will bring a bucket of water and a scuttle of coal for the day's session.**
>
> **Make your quill pens carefully. You may whittle nibs to the individual taste of the pupils.**

(At the "bottom line" of this lengthy edict, which set forth the expected competencies of teachers of that era, was this motivational message: "The teacher who performs his labor faithfully and without fault for five years will be given an increase of twenty-five cents per week in his pay, providing the Board of Education approves.")

In those days – often referred to nostagically as "the good old days" – the teacher had only one source of aid. The "aide" was one of the students. Older students were rewarded for good behavior with the privilege of teaching younger students. Students who misbehaved were "rewarded" with other "privileges" such as fetching the water and scuttling out to the coal bin to replenish the day's supply of fuel.

Some things have changed in schools of today. The buildings are centrally air-conditioned and heated. Teachers still have onerous tasks to perform but they are less menial and physical . . .usually. The demands, however, are equally strenuous or perhaps even more so. The teacher who is trying to help the disadvantaged or handicapped student often finds that the challenge is overwhelming. The cry for help, any help, from any source, is still heard. In most schools, it is unanswered.

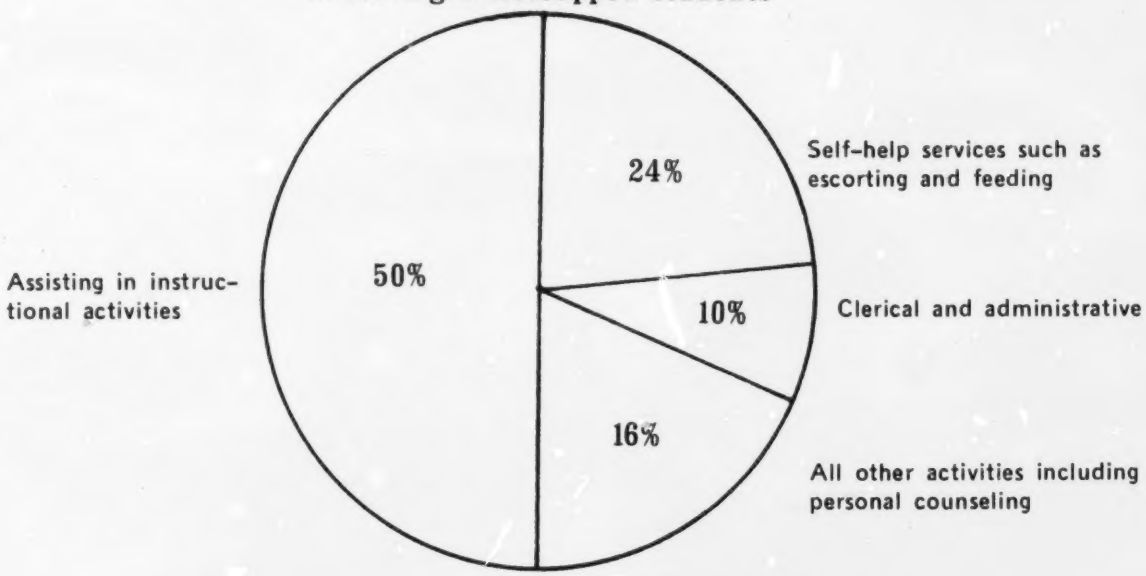
Recently the Comptroller General of the United States compiled a report to the Congress entitled, "Training Educators for the Handicapped: A Need to Redirect Federal

Programs." The report was based on studies made by the United States Office of Education and made several significant points. Here are excerpts of some of these points.

"Mainstreaming handicapped students, or having them spend most of their day in the regular classroom, raises the question of how the busy classroom teacher will find time to meet the educational needs of the handicapped. HEW-funded studies have suggested that the effectiveness of trained professional personnel could be multiplied by having them work with less extensively trained personnel. One study, for example, reported that the use of paraprofessionals released teachers to spend more time with individual students and to prepare and improve instruction.

"Responses of State and local education agencies to our questionnaire indicated that paraprofessionals are being used successfully to serve handicapped children in classrooms throughout the Nation. Most of the paraprofessionals' time was reported to be spent in providing educational instruction, as indicated in the following chart.

Use of paraprofessional's time in serving handicapped students



"In addition to requiring competent trained teachers, educating handicapped children through individualized instruction requires a great deal of time. A 1974 study, jointly funded by several HEW agencies, reported that the lack of personnel to provide handicapped children the degree of individual attention needed was one factor precluding the children from successfully progressing. The study pointed out that (1) working with handicapped children is a labor intensive effort and (2) there is no substitute for attentive, caring persons to instruct, encourage, and discipline.

Statistical data gathered by the General Accounting Office indicate that the current number of new special education graduates exceeds the hiring capacity of school systems. **In view of this, the report suggests that alternative staffing patterns should be considered and emphasis should shift from the production of new college graduates to inservice instruction of regular teachers and teacher aides within school districts.**

Officials of the Bureau of Education for the Handicapped have recognized that it is absolutely vital to the successful education of the handicapped in the regular classroom that regular classroom teachers and paraprofessionals must have special education skills. To accomplish this, the Bureau has initiated several programs for awarding grants to:

- Colleges and universities to encourage the inclusion of preservice instruction in dealing with the handicapped in the regular classroom.
- States, colleges, and universities for inservice training programs for regular education teachers. About $3.5 million was budgeted for FY 76 projects which were expected to reach 10,000 teachers.
- Institutions of higher education for training paraprofessionals to work with the handicapped. About $1.2 million was budget for FY 76 projects which was expected to reach about 1,000 students. (**This is an average training cost per paraprofessional of $1200.**)

The Bureau is proposing that approximately $2.4 million be spent on training paraprofessionals for academic year 1977-78. If approved, this would constitute a four-fold increase in funding in this particular area over the past 3 years. However, this increased level of funding will train only 2,000 paraprofessionals a year and will not increase appreciably the ratio of paraprofessionals to regular classroom teachers.

The report states:

> "Although paraprofessionals are successful in working with the handicapped and in helping to make busy classroom teachers more effective, relatively few paraprofessionals are available to the regular teacher. On the basis of school district responses to our questionnaire, we estimate that only 48,000 paraprofessionals are used in the public schools, as compared with 1.9 million regular classroom teachers."

In compiling this report, State and local education administrators reported the greatest barriers to increasing the number of paraprofessions were:

- the lack of funds for hiring paraprofessionals,
- the lack of trained paraprofessionals if funds were available, and,
- the lack of adequate programs for training paraprofessionals.

Overcoming the Barriers

In Vocational Education, in many parts of the country these three barriers mentioned above are being overcome by the efforts of State and local school officials and the use of Federal and State or local funds.

The trend towards the increasing use of paraprofessionals in Vocational Education began with the Vocational Education Act of 1963 which obligated the State to use part of the funds made available under this act to meet the needs of disadvantaged and handicapped students. The 1968 Amendments to the Vocational Education Act of 1963 required the State to use 15 per cent of its vocational education grant for the needs of disadvantaged students and another 10 per cent for handicapped students. These funds made it possible to reduce class sizes, purchase materials and equipment needed by Special Needs students, and to provide inservice training for teachers working with disadvantaged and handicapped students. However, few paraprofessionals were employed because local matching funds were required to do so.

By making paraprofessionals available on a 100 per cent funding basis in the 1974-1975 school year, the number of paraprofessionals employed increased rapidly in some states. In Arkansas, for example, only eight paraprofessionals were used in vocational education for Special Needs students in the 1973-74 school year. In 1974-75, with 100 per cent funding from Federal funds available, the number increased to 50 in eight areas of vocational education. At the beginning of the 1975-1976 school year, because of the increased interest by administrators, teachers, and community-based groups, the paraprofessional program had over 100 applications.

Eighty-eight paraprofessionals in 85 different programs were employed. Some were on a part-time basis, working as little as one hour per day, while a few were employed full-time. The average workload for vocational paraprofessionals was three hours per day. This summer, according to Mr. Raymond Faucette, Supervisor of Arkansas Disadvantaged and Handicapped Programs, more than 150 applications have been received and he plans to place paraprofessionals in at least 95 programs during the 1977-1978 school year. In most programs, according to Mr. Faucette, the average work-day for the paraprofessional will be lengthened from three to six hours each day.

FACTORS ADDING IMPETUS TO PRESENT TREND TO INCREASED USE OF PARAPROFESSIONAL

Availability of Funds

The availability of funds to pay paraprofessionals has been one of the main factors in the expansion of paraprofessional programs. In most vocational education programs, the primary source of these funds are the so-called "Section 110 Funds" which are categorical, set-aside funds from the basic state grant under the Vocational Education Act. However, in some programs, funding linkages have been established.

Project SERVE, St. Paul, Minnesota, is a good example of joint action and combined funding. In this program, which is designed to serve EMR students in grades 10 through 12, the acronym SERVE represents the three state agencies - Special Education, Rehabilitation Services, and Vocational Education - working together. In Project SERVE, instructional aids provide students with individualized help in completing his or her course of study. Students are scheduled for a half day in class and a half day working in the community. Whenever possible, the student is moved into the mainstream of the school system and ultimately into a competitive environment. The aide is responsible for counseling and for providing instructional assistance but they do no classroom teaching. They serve as "floating counselors" to both regular vocational teachers and their special needs students. Funds from the three agencies are being used for the project. However, plans call for the local school districts to assume a greater proportion of operating costs as vocational education funds are gradually withdrawn.

In Fullerton, California, Project WORKER is also a joint-funding program. Funds are from ESEA, VEA, and local matching funds. In this project, the paraprofessional is not a teacher aide: he or she is a television technician who is a vital staff member because of the unusual training approach employed. Handicapped students, primarily EMR and OH students, use videotapes for learning. In pre-employment training during the freshman year, the videotape recorder is used in simulated job interview situations. Later the students learns from a series of videotapes which depicit workers in different career fields at their actual job stations. Videotapes are also used to show how particular tasks are performed and to involve the student in the actual performance of certain job skills such as filling out a sales slip.

The Effect of the Mainstreaming Concept

Although the term, "mainstreaming," is relatively new in the educational lexicon, it is encountered in the literature with increasing frequency. The term, as generally used, describes a concept under which handicapped and disadvantaged students are integrated into the regular classroom. This does not, however, preclude their receiving reinforcement and assistance when needed to help them in achieving learning goals.

A 1973 study, funded by the Bureau of Education for the Handicapped (BEH), reported that a major goal in special education is mainstreaming handicapped students. This study stressed that segregating the handicapped student is not beneficial because it limits the scope of educational opportunities available. Segregating the handicapped student in a "self-contained classroom" isolates the student from the real world. It also stamps in the negative attitudes the student may have preconceived about self and others. These negative attitudes, when reinforced by separation from normal classmates, becomes a self-fulfilling prophecy of defeat and failure. Special, separated courses which are intended to prepare the disadvantaged or handicapped student for a future career are usually a self-defeating effort. Frequently the curriculum is "watered down" until it no longer reflects the actual competencies required for success in a career field or a specific job. In a segregated learning environment, the students with special needs are not adequately prepared to take a place in the real world of work or to make the physical and psychological adjustments that life will require them to make.

The Influence of Recent Legislation

A series of enactments by Congress has brought about an evolution in the education of learners who are handicapped or disadvantaged. These learners are generally classified as "special needs students" and are so characterized by many diverse and complex factors. In essence, the primary qualifying basis for identifying a student as being disadvantaged or handicapped - a Special Needs student - is the inability to succeed in a regular vocational program without some kind of help.

The Vocational Education Act of 1963 provided funds for meeting the vocational needs of **all** students and obligated the state to use part of these funds to meet the needs of their disadvantaged and handicapped students. **The 1968 Amendments** to that act **mandated** that the state use 15 per cent of its basic grant for vocational education to meet the needs of disadvantaged students and 10 per cent for handicapped students.

The Education Amendments of 1976 (Public Law 94-482) passed on October 12, 1976, included additional amendments to the Vocational Education Act of 1963. One of the amendments, Sec. 110 (a) and (b), related to the vocational education of Special Needs students. It specifies that "10 per centum of each State's allotment. . .shall be used to pay 50 per centum of the cost of vocational education for handicapped persons."

> *AUTHOR'S NOTE: The significant change here is not in the percent allocation; it is in the clearly stated intent of Congress that state funds must be used to match, on a 50% basis, the set-aside funds for handicapped students.*

The amendment further specifies that "for each fiscal year, at least 20 per centum of each State's allotment. . .shall be used to pay 50 per centum of the cost of vocational education for disadvantaged persons (other than handicapped persons). . ." This amendment increases the set-aside proportion from 15% to 20% with the state matching these funds on a 50/50 basis.

The enactment of the original Vocatioral Education Act in 1963 obligated the state to use part of the funds provided by the act to meet the vocational needs of all students. Subsequent amendments have strengthened this requirement. The result of the last amendment, which requires the state to put up matching state funds, cannot be fully appraised at this time.

The approach used in utilizing "Section 110 Funds" varies from state to state. Many states have invested heavily in new equipment and materials needed to provide vocational education for handicapped or disadvantaged students. Some states have used the funds for inservice training of teachers, counselors, and administrators assigned to Special Needs vocational programs.

In Arkansas, an eclectic approach has been employed. Funds have been spent on new equipment, materials and special facilities such as the Media Implementation Center at Little Rock. Inservice training consisting of weekend "drive-in" workshops and summer workshops have been held. The emphasis in the summer workshops has been on curriculum development and teacher-made, multi-media instructional materials. During the last three years, as previously stated, Arkansas has placed more and more emphasis on improving the Special Needs vocational programs by employing part-time and full-time teacher aides. This has reduced the teacher's workload and made it possible for the teacher to give special instruction to individual students when needed.

Other legislation enacted by Congress has effected important changes in the education of learners who are handicapped. **Public Law 91-230** brought about a comprehensive program of activities to facilitate the use of new educational technology in education programs for handicapped persons. From 1964 through 1974, a network of regional and local Special Education Materials Centers (SEIMCs) was established through federal and local funds. These Centers extended a wide range of services in media, materials, and instructional technology to all handicapped children.

Public Law 93-380 stipulated that handicapped children should be educated with nonhandicapped children except when the nature and severity of the handicap precludes satisfactory education in regular classes.

Public Law 94-142, however, is truly epochal legislation. This law, entitled the Education for all Handicapped Children Act of 1975 is intended to result in individualized educational programs for every handicapped child. The act spells out what is meant by an "individualized education program." It means a written statement for each handicapped child. This statement must contain (1) a statement of the present levels of education performance of such child, (2) a statement of annual goals, including short-term instructional objectives, (3) a statement of the specific educational services to be provided to such child and the extent to which such child will be able to participate in regular educational programs, (4) the projected date for initiation and anticipated duration of such services, and (5) appropriate objective criteria and evaluation procedures and schedules for determining, on at least an annual basis, whether instructional objectives are being achieved. (Section 520, PL 94-142.)

The resultant demands placed on teachers of handicapped students by PL 93-380 and PL 94-142 are momentous. The products of PL 91-230, worthy as they may be, will not satisfy these demands. Individualized instruction, as defined by Heathers (1977), consists of any steps taken in planning and conducting programs of studies and lessons that suit them to the individual student's learning needs, learning readiness, and learner characteristics or "learning style." Even when the teacher is working with nonhandicapped students, he or she must possess special competencies to plan and conduct individualized instruction. Mainstreaming handicapped students by having them spend most of the day in the regular classroom raises a critical question of how the busy, harassed teacher will be able to meet the educational needs of the handicapped student on a prescriptive, individualized instructional basis. **This is a challenge that faces not only the vocational educator - it confronts the entire public school system, from grades K through 12.**

Court Decisions

Another "driving force" that seems to make the utilization of paraprofessionals the only way out has been a number of recent court decisions affecting education of the handicapped. Two landmark U.S. District Court decisions handed down in 1971 led to a new era in education of the handicapped. The first, in Pennsylvania, held that **all mentally retarded children** in that state must be provided with an education at public expense. The second, in the District of Columbia, extended that principle to cover **all handicapped children**. As the consequence of these two suits, many others have been filed in other states seeking the same end.

THE DILEMMA OF THE SPECIAL EDUCATION SPECIALIST

As early as 1950, Dr. William M. Cruickshank stated in an address given at the Annual Convention of the New York State Association for Crippled Children, "Our general classroom teachers and administrators need more information about the requirements of exceptional children. . . .If we can make teachers and administrators aware of these needs, aware of places where assistance can be gained, if we can help them to differentiate between those children who logically should be in special classes and those who can be taken care of within the regular classroom, we will have gone a long way towards helping exceptional children." Cruickshank estimated in 1950 that approximately 80% of the handicapped children were not receiving the special educational training required by their condition. Some, he said, are in "so-called special educational classes, which frequently are neither special, nor educational but, for the most part, are purely custodial."

In 1974, a survey indicated that approximately 50% of all handicapped children of school age were receiving the special education they need. This represents an improvement but still leaves an estimated three million handicapped children without the special education they should be receiving. In 1974, BEH estimated that a shortage of 245,000 special education teachers and aides at the elementary-secondary level existed in spite of the fact that Federal funds for the training of teachers, teacher educators, researchers, speech correctionists, and other specialists had increased to $39.6 million, a 14-fold increase during a decade.

The dilemma that faces us today is that we now have a surplus of special education specialists; a surplus that exists at the same time that half of our handicapped students still do not receive the special attention they need. This was pointed out in the recent report to Congress compiled by the Comptroller General of the United States. This report, based on data gathered by a survey conducted by the General Accounting Office, indicates that the current number of new special education graduates now **exceeds the hiring capacity of schools systems.** In view of this, the report suggests that alternative staffing patterns should be considered and emphasis should shift from the production of new

college graduates to inservice instruction of regular teachers and teacher aides within school districts.

The review by the Comptroller General focused on Federal involvement in training teachers of the handicapped. A previous report, which commented on the unavailability and inadequacy of education programs appropriate to the needs of handicapped students, identified one of the causes of this problem as the lack of adequate training for teachers who must educate the handicapped. The data collected came from each State Department of Education, a sample of 757 public school districts, and a sample of 155 colleges and universities having special education teacher preparation programs. Additional information was gained through interviews, examination of special studies, on-site visits, and consultation with experts in the field of special education.

This report makes four specific recommendations to "increase the impact of HEW's teacher-preparation programs in areas of major need":

(1) Provide a major emphasis on programs for training the Nation's regular classroom teachers to effectively deal with the handicapped, in cooperation with State and local education agencies and institutions of higher education.

(2) Discourage the use of Bureau of Education for the Handicapped funds for paying stipends for full-time students, except where such stipends are deemed essential and other sources of student assistance are not available.

(3) Emphasize the need for applying individualized instruction techniques to the handicapped by supporting projects - such as those for preparing and using paraprofessionals - designed to extend the regular classroom teacher's ability to reach individual students.

(4) Develop and implement a plan to provide vocational educators with the skills and abilities needed to effectively deal with the handicapped in the regular classroom.

PERSONNEL POLICIES AND PRACTICES FOR PARAPROFESSIONALS

Educational managers - the planners, the decision-makers, the "fund-ers," the implementers, and the administrators - have learned many lessons from modern industry. A partial listing of these lessons would include computerized scheduling and information systems, management by objectives and management by exception, fiscal control and accountability, etc. One lesson, however, that remains to be learned from proven results in industry is that of personnel management and organization structure. Personnel policies and practices, along with basic organization structure, in most educational settings are based more on traditional patterns than on pragmatic reality. Newman (1950) stated:

> Organization structure deals with the over-all organizations arrangements in an enterprise. Effective administration requires that the structure be in balance and be adapted to major objectives and basic operations. This means that from time to time the administrator must sit back and look at his organization as a whole, and consider whether alterations might produce more effective results.

It is time for educational administrators to take Newman's advice - to sit up and look at instructional staffing in view of the new requirements created by legislative fiat in response to public demand. The alterations in staffing could possibly assume many different staffing arrangements. However, the one that appears to the author to offer the most practical and promising approach is the employment of paraprofessionals to work with professional teachers in classrooms, laboratories, and vocational training shops. However, a decision to adopt this staffing arrangement is only a prelude to other decisions. These other decisions must confront four basic personnel management questions:

- How will the paraprofessional be **selected**?
- How will the paraprofessional be **trained**?
- How will the paraprofessional be **paid**?
- How will the paraprofessional be **utilized**?

Although the parameters of this study did not permit exploring in depth how these questions are being answered in terms of personnel policies and practices in different states

and local school systems, the author was able to investigate several programs in which the answers are vastly different. One is the paraprofessional program in vocational education in Arkansas.

Selection of Paraprofessionals

IN ARKANSAS:

The need for a vocational teacher aide or paraprofessional (the terms are used interchangeably in the Arkansas program) is determined by the number of disadvantaged and/or handicapped students needing assistance in special and regular classes. This requirement is satisfied when 50 per cent of a class of 16 or more students are disadvantaged or handicapped. More than one paraprofessional can be assigned if:

- The class has more than 32 students with more than 50 per cent classified as disadvantaged and/or handicapped;
- The vocational teacher is working more than three one-hour periods per day;
- Two or more vocational teachers may have paraprofessionals that would be alternated and utilized in different vocational classes or on a cooperative basis as the need for their expertise in specific skill areas arose.

According to the Arkansas handbook, "Para-professionals in Vocational Education," "The idea of securing para-professionals should originate with the vocational teachers. The teachers should discuss the Para-Professional Program with their administrators. They may elect to consider involving their advisory committee in this task. After receiving agreeable response to the plan, **the vocational teachers should be permitted to search for someone who is capable in the vocational field.**"

In talking with a number of teachers and paraprofessionals in Arkansas, the author was impressed by the general enthusiasm for the program which was expressed freely and spontaneously by both teachers and paraprofessionals. One of the factors that probably engenders this enthusiastic support of the program is the fact that it is a "grass roots" approach. The vocational teacher initiates the idea and is given permission to seek out the paraprofessional that he or she finds qualified.

The paraprofessional who is recommended by the teacher must possess certain minimal qualifications. The guidelines state that "A vocational para-professional must have at least a

high school education or its equivalent and knowledge of the practices, procedures, terminology, supplies, tools, and equipment used in the designated area." Other personal qualifications listed are:

- good physical and mental health;
- a warmth for, an interest in, and a desire to work with disadvantaged and handicapped students;
- a safe work record
- good grammatical usage
- standards of courtesy and behavior relevant to student expectations; and
- the ability to carry out, under the supervision of the vocational teacher, those practices recommended by the teacher.

The authors of the Arkansas guidelines for selection of paraprofessionals have recognized that more formal education on the part of the vocational paraprofessionals would be of great value. They state that in the few instances where persons with certifiable credentials were employed as aides, the results were "especially rewarding." However, they also state that it is unrealistic to expect aides to have college degrees at the salary scale currently provided.

The major qualification for selection is knowledge and experience in a particular vocational area. No specific period of time is required, however.

OTHER PROGRAMS

Selection and hiring policies differ from program to program. At the Career Development Center at Syosset, New York, several paraprofessionals are employed for a variety of instructional purposes. All are selected by the project director who prepares a job description. The new staff member is then recruited and hired by the school district, known as the Board of Cooperative Educational Services (BOCES).

At Towson, Maryland, where a mobile van travels to 15 Baltimore County high schools, a paraprofessional and an aide spend one week testing and evaluating mildly retarded tenth grade students. The Mobile Unit for Vocational Education assesses the employment potential of students in simulated work stations. Work samples are based on a modification of the Testing Orientation and Work Evaluation and Rehabilitation (TOWER) system. The Mobile Unit is staffed by a project director, an assistant project director, a vocational evaluator, an evaluator aide, and a secretary. All staff are selected and hired by the Baltimore County Board of Education.

In Los Angeles City Schools, Project ACE (Aides to Career Education), assistance is provided to disadvantaged students in vocational education by employing instructional aides to assist in improving the educational performance and in enhancing the employment potential of disadvantaged students. In this project, prospective aides were identified and selected by one of two methods: the department chairmen and their staffs in the participating senior high schools and occupational centers were asked to identify former students who possessed the necessary skills to serve as aides in a specific field; if the school did not identify such individuals, the project coordinator assisted by recruiting and referring prospective aides to schools. During the first year of operation, 1973, 76% of the aides employed were recruited by the schools.

In Michigan, the guidelines for vocational education programs for persons with special needs indicate that local school authorities may hire paraprofessionals under certain prescribed circumstances. For example, a paraprofessional is authorized where a minimum of five special needs students are integrated into a regular class of occupational preparation. The guidelines also specify that a paraprofessional must work under the direct supervision of a certified teacher and must possess a minimum of two years of occupational experience and/or an associate degree and one year of occupational experience in the area in which they received their degree.

In summary, the selection of paraprofessionals varies from project to project, from school system to school system, and from state to state. The qualification requirements and the procedures for recruiting and employment of paraprofessionals also vary. No standard pattern of paraprofessional selection could be found in the course of this study.

Training of Paraprofessionals

IN ARKANSAS

The Arkansas handbook gives broad guidelines for both pre-service and in-service training of vocational paraprofessionals. It states:

> In theory, the aide should be trained to operate instructional equipment and present materials according to the teacher's plan. There needs to be a time designated when the teacher can instruct his/her aide in the presentation of teacher-prepared lesson plans and to coordinate special skills of the paraprofessional into existing lesson plans. In addition, vocational aides should be instructed by the teacher in specific classroom operations and Procedures. **It is recommended that this training be done in pre-service sessions before the opening of the school term.**

Arkansas's guidelines also state:

> Special in-service courses pertaining to instruction for the paraprofessional role in the school and community programs, curriculum methods, teaching and learning processes, and specific skills according to her/his area should be provided.

Arkansas requires that each person employed as a vocational paraprofessional **and the vocational teacher** with whom he/she will work must participate in a minimum of 15 class hours of joint pre-service and in-service training during the first year's work. The handbook also states that thereafter the vocational teacher and the paraprofessional should participate in a pre-school conference of one to five days duration to familiarize each other with the needs of upcoming students, to implement new lesson plans, and to clarify classroom routines and joint responsibilities.

The Arkansas handbook also recommends that the vocational teacher and the paraprofessional should attend annual inservice training sessions **established by the local administrative personnel**, and that "the program policies should be established by the local administration . . . in cooperation with the State Department of Education Guidelines. The length of time, meeting place, and persons attending will be determined by the need for such training, and the amount of funding available."

Arkansas has a program of certification of vocational paraprofessionals based on the inservice training described above. To become a "certified vocational para-professional," the person must obtain a minimum of 15 clock hours of vocational inservice training conducted by the State Department of Education in combination with the local school, during the first year of employment. Then, to become a "certified vocational teacher's assistant," the person must complete two years of experience in the job as a vocational paraprofessional, master the basic skills of his or her service area, and attend and complete a minimum of one inservice training course during the second year of service.

OTHER PROGRAMS

In the program at Los Angeles, **Project Aides to Career Education (ACE)**, the aides selected are given a five-day pre-service training program. District and State Department of Education personnel present instruction on the following topics: school administration, counseling, career advisement, work experience coordination, classified staffing, regional occupation programs, audiovisual techniques, and program accountability. Followup workshops have been held on a monthly basis. The purposes of the workshops are two-fold:

the development of skills of the instructional aides, and the acquisition of feedback about the program.

In **Project SERVE** at St. Paul, Minnesota, both pre and inservice training institutes have been provided for teachers and aides. The training program offers both free and tuition course work varying in length from two days to two months. Most courses are taught by University of Minnesota faculty and cover topics such as special education, guidance, counseling, measurement techniques, and behavioral assessment.

An unusual preparatory program for paraprofessionals is a part of **Project TVID**. The Technical Vocational Institute's Program for Deaf Students (TVID) is a postsecondary training program at the St. Paul Area Vocation Institute. The purpose of the project is to enable deaf or hearing-impaired students to succeed in regular vocational training. Paraprofessionals, some who are volunteers from the student body, provide supportive services such as interpreting, note-taking, tutoring, and extracurricular activities. All TVID staff, including support personnel, participate in preservice training and then enroll in an intensive inservice training program. Courses are offered by the Extension Office of the University of Minnesota. Project staff also attend local, state, and national workshops on technical, vocational, deaf, and special education.

Very few curricula for training paraprofessionals or teacher aides are presently available. One has been produced and distributed nationally by the Link Educational Laboratories, a private corporation, in cooperation with the Division of Vocational Education, Alabama State Department of Education and the USOE, Division of Manpower Development and Training. It is a time-free, modularized, competency-based curriculum.

A similar approach for training teachers and teaching associates working with the severely handicapped student has been designed by Tucker, Hollis, Sailor, Horner, Kelly, and Guess. The competencies identified through this program provide both teachers and teaching associates with requisite performance skills to provide functional educational programs for individuals who are severely and profoundly handicapped. This curriculum model is developed around two training components: informational competencies and performance competencies. Each training module has a format which includes the specification of the criterion required to successfully demonstrate the acquisition of the informational and performance competencies. The training modules are subsumed under a sequence of courses leading to college credit hours.

Funding of Paraprofessional Programs

IN ARKANSAS

Federal funds provided by the 1968 Amendments to the Vocational Education Act of 1963 are being used to provide reimbursement for the vocational paraprofessional program for disadvantaged and handicapped students. However, the Arkansas SDE handbook emphasizes that the paraprofessional's salary should not be limited by the amount that can be reimbursed by the SDE and that Federal funds should be considered in terms of assistance to a school, not as sole means of support for a program. Reimbursement is determined at a rate no greater than $700 per school year for one hour per day (or a total of $2100 where the paraprofessional works three hours each day).

OTHER PROGRAMS

Joint funding has made possible many programs in which paraprofessionals are a part of the staff. **Project SERVE** is an excellent example of this. The acronym, SERVE, represents the three state agencies - Special Education, Rehabilitation, and Vocational Education - which have combined their efforts, and funds to make the program possible. **Project WORKER** at Fullerton, California, has two sources of Federal funds: the Elementary and Secondary Education Act and the Vocational Education Act. These funds are matched by the Fullerton High School District. Funds have also been made available for paraprofessional training and employment through the **Career Opportunities Program (COP)** which was a nationwide program established under the Education Professions Development Act of 1967 to train and employ low-income community residents and Vietnam-era veterans as educational auxiliaries for poverty area schools.

Utilization of Paraprofessionals in Disadvantaged and Handicapped Programs

IN ARKANSAS

Vocational paraprofessionals assist vocational teachers in working with their disadvantaged and/or handicapped students. Dr. Rebecca Collins of Arkansas State University has described these paraprofessionals as "homework helpers, study center supervisors, team-teaching assistants, audiovisual equipment managers, community resource utilization assistants, case finders, group work aides, automated instruction aides, and counselor assistants." The handbook published by the Arkansas SDE describes their duties as "assisting the regular vocational teacher in vocational classes by performing assigned duties designed to help special needs students make progress in basic subjects and skills introduced by the

vocational teacher." The handbook also stipulates that "vocational paraprofessionals must work in the instruction program and any clerical duties must be directly related to the vocational needs of disadvantaged and/or handicapped students." The handbook also presents a lengthy list of activities in which the paraprofessional can contribute to each of the three principal domains of learning - the cognitive, affective, and psychomotor - as delineated by Bloom, et al.

OTHER PROGRAMS

As the author read descriptions and journal articles about various programs in which paraprofessionals are employed, the one thing that stands out is that many innovative practices are being developed in the utilization of paraprofessional as members of the instructional staff. As a matter of fact, Beischer and Hixon (1973) discovered a positive relationship between the use of paraprofessionals and the presence of new or innovative programs in high schools. Their investigation of the 324 New York State secondary principals resulted in a 75% return (243) who supplied information and opinion in response to questionnaires. They found that high school principals believe that innovation is postively related to the presence of paraprofessionals and that they are needed to develop new programs. They also found that in schools where principals support the need for paraprofessionals in innovation, greater numbers of new programs exist and this is paralleled by a corresponding increase in the number of paraprofessionals.

CONCLUSIONS

Paraprofessionals in increasing numbers are appearing as instructional helpers and adjuncts in vocational education courses and in other learning environments. Their work aids and abets the efforts of the professional teacher.

However, it is also true that the employment of paraprofessionals in the classroom, the laboratory, the learning center, or the shop, is still a limited and untried experiment in many schools. Many educators resist or reject their presence as a form of professional incursion and a breakdown in traditional staffing patterns. Other inhibiting factors are financial limitations, disbelief in paraprofessional capabilities, status-quo preservation, school policy restrictions, and community resistance or opposition.

Admittedly, there are other militating factors. One can make a strong case against using inexperienced, untrained paraprofessionals in classes where there are a large number of students who have severe learning disabilities or handicaps that require trained, professional skills and knowledge. This case is strengthened by the fact that we do **not** have a shortage of teachers who have had extensive training in the field of Special Education. In many areas, Special Education specialists are unable to find employment because of limited school budgets. Yet, they are sorely needed.

The purpose of this study, however, was not to decide whether or not paraprofessionals should be employed in lieu of professionals. The purpose was to explore how paraprofessionals are being selected, trained, paid, and utilized. The major conclusion the author has reached is that the paraprofessional is becoming an important member of the teaching staff and will be employed in even greater numbers in the years ahead. From this stems the second conclusion that both professionals (teachers) and paraprofessionals (teacher aides) must learn to work together. Perhaps we can plan for the future by including institutional pre-service training for both. But for the "here and now," inservice training appears to be the only feasible answer.

The form this inservice training should take, and when and where and how it should be conducted, still must be resolved. The author has formulated his own tentative answers to these questions. However, much more investigation and study will be required before these tentative answers can be shaped into a model program.

RECOMMENDATIONS

The author has formulated recommendations on the basis of three assumptions:

Assumption One - Most teachers and teacher aides who will be teaching handicapped and disadvantaged students in the regular vocational education curriculum (under the mainstreaming concept) have not been adequately prepared for this task by preservice training.

Assumption Two - The only feasible, practical method of providing teachers and teacher aides with the knowledge, attitudes, and performance skills required to cope with the challenges of mainstreaming is through inservice training.

Assumption Three - Traditional methods of planning and conducting inservice training programs will not be effective; a new approach to inservice training must be employed.

In reference to the last assumption, Winterton (1977) states that in the past, inservice training has generally been either highly theoretical or almost totally practical. "Either someone delivers a lecture based upon some particular research or someone demonstrates a new technique. In either case, only half the job is being done." Winterton also points out that most inservice programs have been university-based and have consisted of university-offered courses in which traditional methodology is maintained. The motivation for teachers to participate in such training is either the accumulation of credit toward an advanced degree or for maintenance of state certification requirements. Furthermore, the advanced coursework is generally outside the realm of classroom practice and is primarily aimed at preparing the participant for another job, such as administration or counseling. Allen (1972) points out that although a strong case can be made for the need of state standards and the states' responsibilities in maintaining them, certification renewal can require and enforce certain demands but it cannot guarantee personal or professional commitment. The teacher's concern, according to Allen, is for "what is the most efficient and least demanding of my already too-full schedule to get this thing out of the way."

To make inservice training for teachers and teacher aides more effective will require reaching beyond what has been offered before. This "new model" must establish a meaningful congruence between theory and practice. The goals and objectives must be based on needs which are clearly identified and stated. Participating teachers and teacher aides must

have the opportunity to make suggestions concerning the content and methodology of the training. Those involved must be able to expect activities which have relevant application to their jobs in a real and direct manner.

Winterton has proposed an inservice model that meets the criteria stated above. He has called it the "professional day model," a term that indicates that inservice training is a regular, anticipated aspect of the job. The term may be inappropriate for the inservice training model proposed by the author because it might be somewhat confusing. However, the author proposes an inservice training model which **does** conform to Winterton's model in that it will be a regular, anticipated aspect of the job. However, it differs in that both teacher (professionals) and teacher aides (paraprofessionals) will participate together. This "team learning concept" will require administrative support to make it possible to integrate inservice training into the regular activities of the teacher. As Winterton suggests, this may mean restructuring the school schedule to provide four and one-half days of classroom instruction and one-half day for inservice training each week. This may seem to be a radical proposal. However, it can be done without a loss of any classroom time. By adding 15 minutes to both the morning and afternoon of four days, a school could dismiss students two hours early one day each week to make time available for inservice activities. As one author (Reeves, 1974) has pointed out, "the willingness to provide time for inservice is in effect a test of the importance we attach to quality teaching."

Another aspect of the "team learning concept" that the author strongly recommends for inclusion in the inservice training program for teachers and teacher aides is that they learn together and that this learning is self-motivated and self-paced. This can be effected by incorporating several features in the overall design of the program.

- The curriculum for the training must be competency-based. Considerable research has already been conducted to identify these competencies. Sailor, Guess and Lavis (1975) outlined a performance-based program for training teachers of the severely handicapped. Tucker, Hollis, Horner, Kelly, and Guess (1976) selected competencies from this program as the basis for training of teaching associates, or "educational paraprofessionals." Additional research will be required to determine specific competencies required by the teacher only, the aide only, and those which are shared. The shared competencies will become the "core" of the curriculum.

- Based upon the research which identifies the competencies that comprise the content of the curriculum, a curriculum guide must be developed. This curriculum guide will describe each competency and explain precisely why the competency is needed by the teacher and/or the aide in working effectively with handicapped or disadvantaged students. The explanation will also clearly identify the nature of the handicap or learning disability that the competency is related to. The curriculum must be designed in such a way to facilitate quick and easy reference.

- Modules of instruction will be designed to enable the teacher and the aide to attain each of the competencies described in the curriculum guide. In the listing of the competencies, the curriculum guide will also list the related modules of instruction. Each module will be self-contained and self-supporting. In this way, the teacher and the teacher aide will be able to select the competencies they require and plan their own inservice training program.

- The modules will be designed for self-instruction or team learning. In other words, some modules will be accomplished by the teacher or the teacher aide working individually; others will be achieved by both learning together.

- Learning will take place on-site, within the local school or in a local teacher center. The training will permit open-entry, open-exit and enable the learning team to progress at their own rate. Each module will contain a pre-test and post-test which will make it possible for the participants to chart their own progress and for administrators to monitor accomplishment.

- Instructional materials must be developed that are inexpensive, easy to use and store, yet still have high interest characteristics. These specifications rule out the use of media such as motion picture films, videotapes, and other elaborate formats. **The author therefore proposes the selection of a new application of a well-known informational medium.** This is **microfiche**, commonly used as a method of storing information for convenient access and retrieval. The new application is the use of microfiche as a primary means to present instructional materials and, in so doing, to incorporate the proven advantages of programmed instruction and active involvement by the learner.

  NOTE: One of the major reasons for deciding upon microfiche as the primary instructional medium is a recent development by Eastman Kodak Company of a new process by which microfiche can be produced in full color. This enables the designer of the materials to employ interesting and eye-appealing formats that increase the probability of learning. Microfiche can be used in three different modes:

(a) The Reference Mode. In this mode, the microfiche becomes a digest of information reproduced from a printed text, journal article, book, or document.

(b) The Visual Supplement Mode. Microfiche can be used as a visual supplement or reinforcement to other methods of instruction. It can be used for followup and in-depth study.

(c) The Self-Instructional Mode. In this mode, microfiche is used in an entirely self-instructional and self-paced way. Stated performance-based objectives, practice-feedback cycles, and pre- and post-tests can be incorporated in this mode. The microfiche, in this mode, can be used in combination with other media such as cassette tape recordings, workbooks, or other printed materials. In this mode, microfiche lends itself to both linear and branching techniques for programmed instruction. Where a branching mode is desired, the microfiche has obvious advantages over projected media such as slides, filmstrips, videotapes or motion pictures. Microfiche for programmed instruction also has an advantage over programmed texts because of the simplicity of back and forward referencing with the microfiche reader. It is expected that the self-instructional mode described above will become the primary mode for the materials developed.

After the initial development cost of the microfiche learning modules, replication and dissemination is a very inexpensive cost factor. The only investment that must be funded from some source will be to make microfiche readers available as needed by the participants. However, new developments in this area have reduced the price of an excellent microfiche viewer to the cost range of typical filmstrip or slide projectors and many schools already have purchased microfiche viewers.

IN SUMMARY

This monograph is the result of four months of intensive, independent study. During the study, the author read extensively and talked at length with many people who had a direct or indirect interest in the subject of the study. The reference materials which were read, and in some cases referred to in this report, are listed in the attached bibliography. The people with whom the author had contact and discussion include members of the professional staff of Link Enterprises, Inc., a private consulting and training firm; members of the Alabama and Arkansas State Departments of Education; faculty members of Auburn University, the University of Alabama, and the University of Arkansas; Alabama Vocational Rehabilitation personnel, and many teachers, vocational instructors, and Special Education specialists. The author wishes to give special thanks to Dr. Ray Sankovsky, Coordinator for Special Needs at Auburn University, who supervised the study and provided invaluable ideas and support; Dr. John L. Hayman, Jr., Director of the Alabama Information and Development System who helped in the initial search of current literature; and to Mr. Raymond Faucette, the Supervisor of Arkansas Special Needs Programs, who made it possible for me to gain first-hand knowledge of the Arkansas program for using paraprofessionals in Vocational Education.

In essence, this study has resulted in a series of findings by the author. These findings, listed in consequential sequence, are as follows:

1. Mainstreaming of handicapped students into regular classroom and vocational shops or laboratories will be a prevailing and expanding trend in public schools.

2. The regular classroom teacher will thus be confronted with new instructional problems and will need to acquire special competencies.

3. The regular classroom teacher will need additional help to cope with the challenges posed by mainstreaming.

4. Because of budget limitations, most school systems will be unable to employ Special Education specialists to help the classroom teacher.

5. Help can be provided at reasonable expense by employing part-time or full-time teacher aides.

6. The regular classroom teacher and the teacher aide will require inservice training to acquire needed competencies.

7. Limitations of school funds preclude inservice training programs such as workshops or institutes which require the teacher and the teacher aide to travel, be absent from normal duties, and necessitate hiring substitute teaching personnel.

These seven findings then became the foundation of an innovative concept in in-service teacher training: the "team learning concept." The team is the two-person team consisting of the teacher (the professional) and the teacher aide (the paraprofessional). Under the team learning concept, they will learn as a team because they must function as a team in the classroom, laboratory, or vocational shop. They must work together to meet the needs of handicapped students and disadvantaged students and to make it possible for these students to benefit from a mainstream environment. The inservice training program outlined will take place on-site, within the local school or teacher center and the learning materials will be designed for self-paced, self-directed learning. In the process of learning together as a team, it is expected that the two individuals will develop or strengthen a close, personal relationship that will enhance their working relationship. It is very possible that in some modules of the instruction the teacher will be able to help the aide grasp the meanings by clarifying terms and by drawing upon previous professional training or experiences. In other parts of the inservice training program, the aide may function as the "teacher" because he or she may have more first hand experience and closer communication with handicapped or disadvantaged students than the regular teacher. Thus, a mutually-supportive relationship may be created through team learning experiences. **This helping relationship, in the author's opinion, will be the most important outcome of the team learning concept approach to inservice training.**

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